Anti-ship missile prototype successfully conducts first solo test flight

September 9 2013

B-1 bomber.

Adversaries' sophisticated air defense systems can make it difficult for current air- and surface-launched anti-ship missiles to hit their targets at long range. To engage specific enemy warships from beyond the reach of counter-fire systems, warfighters may require launching multiple missiles or employing overhead targeting assets such as radar-equipped

planes or Global Positioning System (GPS) satellites—resources that may not always be available. To help address these challenges, the Defense Advanced Research Projects Agency (DARPA) and the Office of Naval Research (ONR) are collaborating on the Long Range Anti-Ship Missile (LRASM) program, which successfully launched its first prototype on August 27.

Designed for both surface and air launch,LRASM seeks to develop an autonomous, precision-guided anti-ship standoff missile based on the successful Joint Air to Surface Standoff Missile Extended Range (JASSM-ER) system. LRASM aims to incorporate sensors and systems to create a stealthy and survivable subsonic cruise missile with reduced dependence on intelligence, surveillance and reconnaissance (ISR) platforms, network links and GPS navigation in electronic warfare environments. The program also focuses on precision lethality in the face of advanced countermeasures.

"This fully functional test is a significant step in providing the U.S. Navy and U.S. Air Force with a next-generation anti-ship missile capability," said Artie Mabbett, DARPA program manager for LRASM. "This test is the culmination of the five-year development and integration of advanced sensors in an All-Up-Round (AUR) missile. It also represents the first time we've integrated advanced sensors and demonstrated the entire system, resulting in performance that substantially exceeds our current capabilities."

DARPA designed the free-flight transition test (FFTT) demonstration to verify the missile's flight characteristics and assess subsystem and sensor performance. Beyond the primary objectives of the free-flight transition, the test vehicle also detected, engaged and hit an unmanned 260-foot Mobile Ship Target (MST) with an inert warhead.

The test vehicle detected, engaged and hit an unmanned 260-foot Mobile Ship Target (MST) with an inert warhead

A B-1 bomber from the 337th Test and Evaluation Squadron conducted the mission from Dyess AFB, Tex., to the Point Mugu Sea Test Range off the coast of southern California. Once in position, the B-1 released the LRASM, which followed a pre-planned route towards the target. Approximately halfway to its destination, the weapon switched to autonomous guidance, in which it autonomously detected the moving MST and guided itself to hit the desired location on the target. A F/A-18 fighter from the Air Test and Evaluation Squadron (VX) 31 in China Lake, Calif., followed the weapon during the flight.

Lockheed Martin Missiles and Fire Control (LMMFC) is the prime contractor for the demonstration of the LRASM weapon. BAE Systems' Information and Electronic Systems Integration division is the prime contractor for the design and delivery of LRASM's onboard sensor systems.

More information: www.darpa.mil/Our_Work/TTO/Pro … Missile_(LRASM).aspx

Provided by DARPA